AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) A structure for a semiconductor device, provided with a contact plug, which is formed by forming a contact hole through a first interlayer insulating film on a silicon substrate and by filling the contact hole with silicon, comprising:

a silicide pad formed on the top surface of the silicon contact plug in a self-aligning manner with said silicon contact plug and having a diameter which is larger than that of the silicon contact plug;

wherein, a portion of said silicon contact plug extends beyond the first interlayer insulating film so that the top surface of said silicide pad is formed above the top surface of said first interlayer insulating film, said silicide pad contacting an entirety of said portion of said silicon contact plug that extends beyond the first interlayer insulating film.

2. (original) A structure of a semiconductor device according to claim 1, wherein said silicide pad is formed by a refractory metal silicide.

3. (original) A structure of a semiconductor device according to claim 1, wherein said refractory metal silicide is any one of titanium silicide and cobalt silicide.

4. (canceled)

5. (currently amended) A method for manufacturing a semiconductor device ~~according to claim 4~~, provided with a contact plug, which is formed by opening a contact hole through a first interlayer insulating film formed on a silicon substrate and filling the contact hole with silicon, comprising ~~wherein the step of forming said silicide pad includes~~ the steps of:

forming a first insulating film on said silicon substrate;

forming said contact hole through said first interlayer insulating film;

filling said contact hole with a silicon plug; and

forming a silicide pad in a self-aligning manner with the silicon plug, the silicide pad having a larger diameter than that of said silicon plug,

wherein the step of forming said silicide pad includes the steps of:

selectively and partially removing the insulating film and silicon at least in the vicinity of said contact plug such that the plug protrudes;

depositing a refractory metal film;

converting the refractory metal film into [[the]] a refractory metal silicide by a heat treatment; and

removing said ~~refractor~~ refractory metal film remaining without being converted into silicide and reaction products between said refractory metal and an atmospheric gas during the heat treatment.

6. (original) A method for manufacturing a semiconductor device according to claim 5, wherein said refractory metal is at least any one of titanium and cobalt.

7. (currently amended) A structure of a semiconductor device, comprising:

a silicon substrate;

a first interlayer insulating film having a first surface connected to said substrate;

a polysilicon contact plug formed through said first interlayer insulating film having a top end surface and a top side surface protruding from a second surface of said first insulating layer, so as to form a protrusion;

a silicide pad formed covering said top end surface and said top side surface of said polysilicon contact plug in a self-aligning manner with said polysilicon contact plug, so that said silicide pad contacts an entirety of said protrusion and said

silicide pad having a diameter which is larger than a diameter of the polysilicon contact plug, said silicide pad being above said second surface of said first interlayer insulating film.

8. (previously presented) The structure of a semiconductor device according to claim 7, wherein said silicide pad is a refractory metal silicide.

9. (currently amended) The structure of a semiconductor device according to claim 7, wherein said ~~refratory~~ refractory metal silicide is at least one of titanium silicide, tungsten silicide, molybdenum silicide, tantalum silicide and cobalt silicide.

10. (previously presented) The structure of a semiconductor device according to claim 7, further comprising:

a second interlayer insulating film on the second surface of said first interlayer insulating film and on said silicide pad;

a tungsten plug through said second interlayer insulating film and aligned with the polysilicon contact plug, said tungsten plug contacting said silicide pad; and

an aluminum copper alloy connected to said second interlayer insulating film and said tungsten plug.

11. (currently amended) A structure of a semiconductor device, comprising:

a silicon substrate;

a first interlayer insulating film having a first surface on the substrate;

a polysilicon contact plug through said first interlayer insulating film, said polysilicon contact plug having a protruding portion extending beyond said first interlayer insulating film;

a silicide pad formed on ~~a first surface of said polysilicon contact plug~~ said protruding portion so that said silicide pad contacts an entirety of said protruding portion, said silicide pad being formed in a self-aligning manner with said polysilicon contact plug and having a diameter which is larger than the polysilicon contact plug, a first surface of said silicide pad being above a second surface of said interlayer insulating film; and

a second interlayer insulating film on said first interlayer insulating film on said silicide pad.

12. (previously presented) A structure of a semiconductor device according to claim 11, further comprising:

an upper plug on the polysilicon plug and through said second interlayer insulating film and aligned with the polysilicon contact plug;

and a conductive film connected to said second interlayer insulating film and said upper plug.

13. (currently amended) A method for manufacturing a semiconductor device, comprising the steps of:

forming a silicon substrate;

forming a first interlayer insulating film above the silicon substrate;

forming a first contact hole though the first interlayer insulating film;

forming a polysilicon layer on the first interlayer insulating film, the polysilicon layer filling the contact hole and forming a polysilicon plug; [[and]]

selectively and partially removing the first insulating film and the polysilicon layer at least in the vicinity of the polysilicon plug such that the polysilicon plug protrudes from the first interlayer insulating layer; and

forming a silicide pad on the polysilicon plug in a self-aligning manner with the polysilicon plug, the silicide pad having a diameter larger than a diameter of the polysilicon plug, a first surface of the silicide pad being disposed above an upper surface of the first interlayer insulating film, said silicide pad being formed by:

depositing a refractory metal film over the polysilicon plug and the first interlayer insulating layer;

heat treating the refractory metal film, said heat treating step converting first sections of the refractory metal film into a refractory metal silicide and forming reaction products;

removing second sections of the refractory metal film that were not converted into refractory metal silicide, the first sections being the silicide pad; and

removing the reaction products that were formed during the heat treating step.

14. (canceled)

15. (currently amended) The method for manufacturing a semiconductor device according to claim [[14]] 13, wherein the refractory metal is at least one of titanium, tungsten, molybdenum, tantalum and cobalt.

16. (previously presented) The method for manufacturing a semiconductor device according to claim 13, further comprising the steps of:

forming a second interlayer insulating film on the first interlayer insulating film and on the silicide pad;

forming a second contact hole through the second interlayer insulating film, the second contact hole extending to the silicide pad;

forming a titanium nitrite layer on walls of the second contact hole and on the silicide pad;

filling the contact hole with tungsten to form a tungsten plug, the tungsten plug contacting the titanium nitrite layer and being connected to the polysilicon plug through the silicide pad and being aligned with the polysilicon plug; and

forming a tungsten layer on the second interlayer insulating film and contacting the tungsten plug.

17. (currently amended) A method for manufacturing a semiconductor device, comprising the steps of:

forming a silicon substrate;

forming a first interlayer insulating film above the silicon substrate;

forming a first contact hole through the first interlayer insulating film;

forming a polysilicon layer on the first interlayer insulating film, the polysilicon layer filling the contact hole and forming a polysilicon plug;

forming a silicide pad in a self-aligning manner with the polysilicon plug, the silicide pad having a diameter larger than a diameter of the polysilicon plug, a first surface of the silicide pad being disposed above an upper surface of the first interlayer insulating film;

forming a second interlayer insulating film on the first interlayer insulating film and on the silicide pad;

forming a second contact hole through the second interlayer insulating film, the second contact hole extending to the silicide pad;

forming a titanium nitrite layer on walls of the second contact hole and on the silicide pad;

filling the contact hole with tungsten to form a tungsten plug, the tungsten plug contacting the titanium nitrite layer and being connected to the polysilicon plug through the silicide pad and being aligned with the polysilicon plug; and

forming a tungsten layer on the second interlayer insulating film and contacting the tungsten plug,

wherein the step of forming said silicide pad includes the steps of:

selectively and partially removing the insulating film and silicon at least in the vicinity of said contact plug such that the plug protrudes;

depositing a refractory metal film;

converting the refractory metal film into a refractory metal silicide by a heat treatment; and

removing said refractory metal film remaining without being converted into silicide and reaction products between said refractory metal and an atmospheric gas during the heat treatment.

18. (new) The semiconductor device according to claim 12, wherein said upper plug is metal.

19. (new) Method according to claim 13, further comprising the step of forming a metal plug on said silicide pad.

20. (new) The structure for a semiconductor device as claimed in claim 1, wherein said silicide pad is substantially U-shaped in cross-section.